GENERAL NOTES

DEMOLITION

1. EXISTING HVAC PIPING, DUCTWORK, AND EQUIPMENT SHOWN IS BASED ON EXISTING PLANS AND FIELD OBSERVATION WITHOUT DEMOLITION. AFTER DEMOLITION, ANY CLARIFICATION REQUIRED TO DETERMINE SCOPE OF WORK SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
2. THE CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS.
3. DRAWINGS DO NOT SHOW EVERY EXISTING PIPE, CONDUIT, DUCT, ETC. CONTRACTOR SHALL TAKE CARE TO REMOVE ONLY ITEMS REQUIRED TO BE REMOVED AND VERIFY PIPES, DUCTS, ETC. BEFORE REMOVAL.
4. REMOVAL OF ITEMS SHALL INCLUDE ASSOCIATED HANGERS, ANCHOR BOLTS AND OTHER APPURTENANCES. WHERE SUCH REMOVAL RESULTS IN OPEN HOLES, VOIDS OR EXPOSURE OF DAMAGED SURFACES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND FINISHING THE SURFACE TO MATCH ADJACENT CONDITIONS. THIS WORK SHALL BE COORDINATED WITH ARCHITECTURAL FINISH SCHEDULES WHERE APPLICABLE.
5. BUILDING IS TO REMAIN OCCUPIED DURING CONSTRUCTION. REMOVAL OR SHUT-DOWN OF EQUIPMENT THAT AFFECTS ANY OCCUPIED AREA'S AIR CONDITIONING OR HEATING SHALL ONLY BE DONE AS APPROVED OR TEMPORARY AIR CONDITIONING OR HEATING SHALL BE PROVIDED AT CONTRACTOR'S EXPENSE. THIS MAY REQUIRE NIGHT AND WEEKEND WORK TO KEEP BUILDING IN OPERATION.
6. REMOVE EXISTING DUCTWORK AND PIPING NOT TO BE REUSED.
7. ALL MATERIALS REMOVED UNDER DEMOLITION, NOT TO BE RELOCATED OR DESIGNATED TO BE TURNED OVER TO THE OWNER, SHALL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED, AND SHALL BE REMOVED COMPLETELY FROM THE SITE.

GENERAL ITEMS

8. GENERAL NOTES ON THIS DRAWING ARE APPLICABLE TO EACH HVAC DRAWING OF THIS SET. SEE EACH DRAWING FOR SPECIFIC NOTES APPLICABLE TO THAT DRAWING.
9. COORDINATE THAT OUTSIDE AIR INTAKE OPENINGS FOR VENTILATION AIR ARE LOCATED AT LEAST 10 FEET MEASURED IN ANY DIRECTION FROM ANY FLUES, VENTS, CHIMNEYS, GAS METERS, GAS REGULATORS, PLUMBING VENTS UNLESS TOP OF SUCH INTAKE OPENING IS 2 FEET BELOW ANY OF THE LISTED ITEMS.
10. OVERHEAD PIPING IN SPACES WITHOUT HUNG CEILINGS SHALL BE RUN AS CLOSE TO ROOF DECK AS PRACTICAL, AS CLOSE TO PARALLEL JOISTS AS POSSIBLE AND ABOVE LIGHTING FIXTURES TO CONCEAL PIPING.
11. OVERHEAD DUCTWORK AND PIPING IN SPACES WITH CEILINGS SHALL BE CONCEALED UNLESS OTHERWISE NOTED.
12. PROVIDE PIPE SLEEVES LARGE ENOUGH TO ALLOW FOR REQUIRED LATERAL MOVEMENT OF PIPING.
13. EXERCISE DUE CAUTION IN INSTALLING RUNOUTS AND BRANCH PIPING FROM MAINS FOR EXPANSION MOVEMENT.
14. COORDINATE LOCATION OF GRILLES, REGISTERS, DIFFUSERS, THERMOSTATS AND OTHER WALL OR CEILING MOUNTED HVAC ACCESSORIES WITH REFLECTED CEILING PLAN, LIGHTING FIXTURE LAYOUT AND ACCESSORIES INSTALLED BY OTHER TRADES SO AS TO PRESENT A NEAT AND ATTRACTIVE INSTALLATION THROUGHOUT THE ENTIRE BUILDING. IT IS THE INTENT FOR GRILLES, REGISTERS AND DIFFUSERS TO BE INSTALLED IN THE CENTER OF CEILING PANELS.
15. EQUIPMENT ON THE ROOF SHALL BE INSTALLED SO AT LEAST 10 FEET OF CLEARANCE SHALL BE MAINTAINED BETWEEN EQUIPMENT AND THE ROOF EDGE.
16. ARRANGE PIPING AND DUCTWORK, PARTICULARLY ABOVE CEILING AS REQUIRED TO CLEAR STRUCTURE, DUCTS, CONDUITS, ETC. ALLOWING SPACE FOR PIPE HANGERS, EXPANSION LOOPS AND ACCESS TO VALVES, FILTERS, AND MAINTENANCE OF EQUIPMENT.
17. CONTRACTOR SHALL VERIFY REFRIGERANT PIPE SIZES WITH EQUIPMENT MANUFACTURER FOR THE INDICATED INSTALLATION.
18. COORDINATE LOCATION AND INSTALLATION OF EQUIPMENT WITH OTHER TRADES.
19. DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF DOORS, WINDOWS, ETC.
20. THERMOSTATS SHALL BE LOCATED IN THE ROOMS INDICATED. INSTALL AT APPROX. 48" ABOVE FINISH FLOOR.
21. PIPING, DUCTWORK, VENTS, ETC., EXTENDING THROUGH EXTERIOR WALLS AND ROOF SHALL BE FLASHED AND COUNTER FLASHED IN A WEATHERPROOF MANNER.
22. VALVES AND SPECIALTIES SHALL BE LINE SIZE EXCEPT FOR CONTROL VALVES OR UNLESS NOTED OTHERWISE.
23. PIPING AND DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH NON-RATED FLOORS, WALLS, ROOF AND PARTITIONS, UNLESS OTHERWISE INDICATED.
24. NO PIPING SHALL BE SMALLER THAN 3/4" UNLESS OTHERWISE NOTED.
25. FOR PIPE SIZES NOT INDICATED ON PLANS, SEE EQUIPMENT CONNECTION DETAILS, FLOW DIAGRAMS AND RISER DIAGRAMS AND PIPE SIZING SCHEDULE.
26. PROVIDE UNION OR FLANGED CONNECTIONS AT EACH PIECE OF EQUIPMENT AND ON BOTH SIDES ON CONTROL VALVES AND PRESSURE REGULATING VALVES. PROVIDE SHUT-OFF VALVES ON BOTH SIDES OF AUTOMATIC VALVES.
27. PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE SPECIFICATIONS. ADDITIONAL S UPPORTS OR HANGERS SHALL BE ADJACENT TO ELBOWS, TO PREVENT WEIGHT OF PIPING BEING PLACED ON THE EQUIPMENT.
28. CORRECT SETTING ON BALANCING FITTINGS SHALL BE PERMANENTLY MARKED.
29. FOR LOCATION OF MOTOR STARTERS, SEE ELECTRICAL DRAWINGS.

FIRE CAULKING

30. PROVIDE UL LISTED THROUGH PENETRATIONS FOR FIREWALLS AND FLOORS. REVIEW ARCHITECTURAL DRAWINGS FOR PERMANENT AND TEMPORARY FIRE PARTITION LOCATIONS AND UL LISTINGS.

HOT AND CHILLED WATER PIPING

31. PROVIDE MINIMUM PITCH SUFFICIENT TO INSURE ADEQUATE VENTING AND DRAINAGE.
32. PROVIDE MANUAL AIR VENTS AT HIGH POINTS OF SYSTEM.
33. PROVIDE 1/2" DRAIN VALVES AND CAPPED CONNECTIONS AT LOW POINTS IN PIPING SYSTEMS FOR DRAINING.

SHEET METAL

34. PROVIDE INTERNAL SOUND ABSORPTIVE DUCT LINING FOR EXTENT NOTED. DUCT DIMENSIONS ARE CLEAR INSIDE DUCT LINING DIMENSIONS.
35. PROVIDE ACCESS DOORS IN DUCTWORK WHERE INDICATED OR REQUIRED FOR ACCESS TO SYSTEM COMPONENTS INCLUDING THE FOLLOWING:
    - FILTERS
    - BOTH SIDES OF HEATING AND COOLING COILS
    - FIRE DAMPERS
    - CONTROL DAMPERS
    - SMOKE DETECTORS
36. INSTALL CEILING REGISTERS A MINIMUM OF 4" FROM EXTERIOR WALL.
37. PROVIDE A MINIMUM OF THREE TIMES THE FAN DIAMETER OF STRAIGHT DUCTWORK OFF THE SUPPLY AIR FAN DISCHARGE BEFORE ANY TAKEOFFS OR ELBOWS.
38. LOW PRESSURE DUCTWORK SHALL BE CONSTRUCTED TO THE SMACNA STATIC PRESSURE CLASSIFICATION OF 2" W.G. AND SEAL CLASS "B".
39. MEDIUM PRESSURE DUCTWORK (UPSTREAM OF VAV BOX) SHALL BE CONSTRUCTED TO THE SMACNA STATIC PRESSURE CLASSIFICATION OF 6" W.G. AND SEAL CLASS "A".
40. PROVIDE EXTENDED VOLUME DAMPER CONTROL RODS SO THAT HANDLES ARE WELL CLEAR OF DUCT INSULATION.

MAINTENANCE

41. EQUIPMENT WITH FILTERS SHALL BE INSTALLED SO THAT FILTERS CAN BE EASILY REMOVED AND REPLACED.
42. EQUIPMENT INSTALLED ABOVE CEILINGS SHALL BE MOUNTED APPROX. 12" ABOVE CEILING (UON) FOR MAINTENANCE ACCESS.
43. INSTALL PIPE RUNS AT LEAST 6" ABOVE CEILING TILES. WHERE PRACTICABLE INSTALL VALVES, AND OTHER MAINTAINABLE DEVICES LOW ENOUGH TO REACH WITH A 6' LADDER.
44. PROVIDE ACCESS TO ANY INSPECTION OR MAINTAINABLE DEVICE, EQUIPMENT, ETC. – ACCESS OR ACCESS DOOR SHALL BE OF ADEQUATE SIZE TO WORK ON DEVICE.
45. EXAMINE MANUFACTURER'S LITERATURE TO DETERMINE RECOMMENDED CLEARANCES. THESE CLEARANCES SHALL BE ESTABLISHED AND MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THESE REQUIREMENTS WITH ALL OTHER TRADES.

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LEGEND and ABBREVIATIONS

(1)	DEMOLITION NOTE DESIGNATION
1	NEW WORK NOTE DESIGNATION
	POINT OF CONNECTION NEW TO EXISTING
	POINT OF DEMOLITION LIMIT
DSS-1	DUCTLESS SPLIT SYSTEM DESIGNATION
EF-1	EXHAUST FAN DESIGNATION
FCU-1	FAN COIL UNIT DESIGNATION
RTU-1	ROOFTOP AIR HANDLING UNIT DESIGNATION
EUH-1	ELECTRIC UNIT HEATER DESIGNATION
HWC-1	HOT WATER COIL DESIGNATION
VAV-1	VARIABLE AIR VOLUME DESIGNATION
UH-1	UNIT HEATER DESIGNATION
UV-1	UNIT VENTILATOR DESIGNATION
T	WALL THERMOSTAT
BDD	BACKDRAFT DAMPER
	VOLUME DAMPER
UC	DOOR UNDERCUT (1")
S	SMOKE DETECTOR
X / 200	GRILLE, REGISTER OR DIFFUSER MARK (CFM AS INDICATED)
	12x12 ACCESS DOOR
	SUPPLY AIR/OUTSIDE AIR DUCT SECTION THROUGH ROOF
	RETURN/EXHAUST DUCT SECTION THROUGH ROOF
	CEILING DIFFUSER WITH FLEXIBLE DUCTWORK
	RETURN/EXHAUST REGISTER
	MITERED ELBOW WITH TURNING VANES
	FLEXIBLE DUCT CONNECTOR

	ISOLATION VALVE
	BALANCING VALVE
	STRAINER
	TWO-WAY CONTROL VALVE
	UNION
	THERMOMETER
	MANUAL AIR VENT
	PIPE TURNING UP
	PIPE TURNING DOWN
CWS OR CHS	CHILLED WATER SUPPLY PIPING
CWR OR CHR	CHILLED WATER RETURN PIPING
D	CONDENSATE DRAIN
HWS	HOT WATER SUPPLY PIPING
HWR	HOT WATER RETURN PIPING
RL	REFRIGERANT LIQUID PIPING
RS	REFRIGERANT SUCTION PIPING
	SMOKE PARTITION
	1 HOUR FIRE RATED WALL

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A.F.F.	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
APPROX.	APPROXIMATELY
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
DB	DRY BULB TEMPERATURE
E.A.	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB TEMPERATURE
EWB	ENTERING WET BULB TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
ETR	EXISTING TO REMAIN
ESP	EXTERNAL STATIC PRESSURE
FT	FEET
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
IN	INCH
LDB	LEAVING DRY BULB TEMPERATURE
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MCA	MIN CIRCUIT AMPACITY
MIN	MINIMUM
MOCP	MAX OVERCURRENT PROTECTION
NC	NOISE CRITERIA
O.A.	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
P.D.	PRESSURE DROP
R.A.	RETURN AIR
S.A.	SUPPLY AIR
SENS.	SENSIBLE
SP	STATIC PRESSURE
(TYP.)	TYPICAL
UON	UNLESS OTHERWISE NOTED
WB	WET BULB TEMPERATURE
WG	WATER GAUGE
WPD	WATER PRESSURE DROP
ø	PHASE/DIAMETER
°F	DEGREE FAHRENHEIT

ASBESTOS NOTE

AN ASBESTOS INSPECTION SHALL BE PERFORMED AND ASBESTOS CONTAINING MATERIALS SHALL BE REMOVED.

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WARSAW + GLENNS, VIRGINIA
PC: 260-17712

GLENNS AND WARSAW CAMPUS
MECHANICAL GENERAL NOTES, LEGEND, AND ABBREVIATIONS

Date: MARCH 3, 2010

REVISIONS

NO.	DATE
1	FEBRUARY 9, 2010
2	MARCH 3, 2010

COMMONWEALTH OF VIRGINIA
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